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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/549,447	09/14/2005	Chiaki Sasaoka	029437-0111	5540
22428	7590	07/03/2007		
FOLEY AND LARDNER LLP			EXAMINER	
SUITE 500			ZHANG, YUANDA	
3000 K STREET NW				
WASHINGTON, DC 20007			ART UNIT	PAPER NUMBER
			2828	
			MAIL DATE	DELIVERY MODE
			07/03/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

TH

<b>Office Action Summary</b>	<b>Application No.</b> 10/549,447	<b>Applicant(s)</b> SASAKA, CHIAKI	
	<b>Examiner</b> Yuanda Zhang	<b>Art Unit</b> 2828	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 14 September 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) 7-12 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 September 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some    \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>09/14/05 and 12/15/06</u> . | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Priority***

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### ***Information Disclosure Statement***

2. The information disclosure statement (IDS) submitted on 09/14/05 and 12/15/06 is being considered by the examiner.

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-6 are rejected under 35 U.S.C. 102(b) as being anticipated by Nidou et al (JP 2001-320120 A).
5. In re claim 1, with reference to figure 6, Nidou et al disclose a semiconductor laser comprising a GaN-based semiconductor substrate (n mold GaN contact layer 62) and laminated layers (layers 64-71) formed on the GaN-based semiconductor substrate which include a GaN-based semiconductor clad layer (AlGaN cladding layer 65) containing Al and an active layer (barrier layer 67) formed thereabove, wherein the side surfaces of the laminated layers along the direction of the resonator of the semiconductor laser are inclined in such a direction that the resonator width is

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decreased from the GaN-based semiconductor substrate side to the upper portion of the laminated layers (figure 6 and Paragraph [0052]).

6. In re claim 2, Nidou et al disclose masks (63) are formed on the GaN-based semiconductor substrate (62) and the laminated layers (layers 64-71) are formed above the masks so that the side surfaces of the laminated layers along the direction of the resonator are from the grown surfaces of the semiconductor layers which have been selectively grown from the masks (Paragraph [0052]).

7. In re claim 3, Nidou et al disclose the end surfaces of the resonator of the semiconductor laser are cleavage planes of the GaN-based semiconductor substrate and the laminated layers (Paragraph [0064]).

8. In re claim 4, with reference to figure 8, Nidou et al disclose a semiconductor laser comprising a GaN-based semiconductor substrate (n mold GaN substrate 92) and laminated layers (layers 80-87) formed on the GaN-based semiconductor substrate which include a GaN-based semiconductor clad layer (AlGaIn cladding layer 82) containing Al and an active layer (barrier layer 84) formed thereabove (Paragraph [0058]), wherein there are formed a pair of slots extending in the direction of the resonator of the semiconductor laser, and the active layer is formed in the region sandwiched between the pair of slots (figure 8).

9. In re claim 5, Nidou et al disclose the laser comprising masks (80) are provided on the bottom surfaces of the pair of slots, wherein the side surfaces of the slots are the grown surfaces of the semiconductor layers which have been selectively grown from the masks (figure 8).

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10. In re claim 6, Nidou et al disclose the pair of slots include exposed surfaces of the GaN-based semiconductor clad layer (AlGaN cladding layer 82) containing Al and the side surfaces of the slots are inclined in such a direction that the width between the slots is decreased from the GaN-based semiconductor substrate side to the upper portion of the laminated layers (figure 8).

### ***Conclusion***

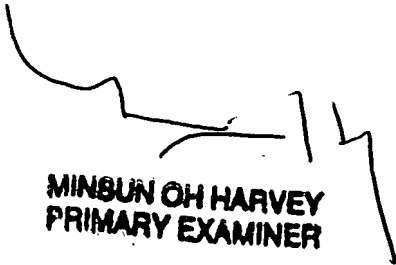
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yuanda Zhang whose telephone number is 571-270-1439. The examiner can normally be reached on Monday-Thursday, Alternating Fri 8:30am-6:00p EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Minsun Harvey can be reached on 571-272-1835. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

YZ  
06/11/07

  
**MINSUN OH HARVEY  
PRIMARY EXAMINER**